

Work Order ID 53438

November 4, 2009 11:51:06 AM



Page 1

Item ID: D3957-1

Accept



Setup Start



Revision ID: A

Stop



Item Name: Hinge, Door LH Upper

Start Date: 11/04/09 Start Qty: 6.00



Cust Item ID:

Required Date: 11/10/09 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3957

A

100

0.00



Bandsaw

Jeaspa Bandsaw

Memo

cut blank to 3.200" long

0.00

[Signature] 09/11/11

6 φ

110

0.00



HAAS 1

HAAS CNC vertical machine #1

Memo

1-Machine as per Folio FA838

FOLIO REV: A

DWG REV: A

0.00

H.A 09/11/12

6 φ

2-FINISH TAPPING TO FULL DEPTH BY HAND AS PER DWG

3-DEBURR AS PER dWG

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53438

November 4, 2009 11:51:06 AM

Page 2

Item ID: D3957-1

Accept

Revision ID: A

Item Name: Hinge, Door LH Upper

Setup Start

Stop

Start Date: 11/04/09 Start Qty: 6.00

Required Date: 11/10/09 Req'd Qty: 6.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

M.A 09/11/12

6

Ø

QC

Memo

0.00

Quality Control

130

QC8- Inspect parts - second check

0.00

ant 09/11/12

6

Ø

QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

7/11 09/11/13

(X6)

Ø

HandFinish

Memo

0.00

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53438

November 4, 2009 11:51:07 AM

Page 3

Item ID: D3957-1

Accept

Setup Start

Revision ID: A

Stop

Item Name: Hinge, Door LH Upper

Start Date: 11/04/09 Start Qty: 6.00

Cust Item ID:

Required Date: 11/10/09 Req'd Qty: 6.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum START: 8:00AM Temp: 320°F FIN: 8:30AM Memo MASK THREADED HOLE	0.00 0.00	⇒ 09/11/13			(X6)	0		
160 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00	MD 09/11/13			X6			
170 Packaging Packaging	Identify as per dwg & Stock Location: GA Memo	0.00 0.00	8309/11/14			6	8		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53438

November 4, 2009 11:51:07 AM

Page 4

Item ID: D3957-1

Accept

Setup Start

Revision ID: A

Stop

Item Name: Hinge, Door LH Upper

Start Date: 11/04/09 Start Qty: 6.00

Cust Item ID:

Required Date: 11/10/09 Req'd Qty: 6.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/17

MF 09-11-16

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November 4, 2009 11:51:05 AM

Page 1

Work Order ID: 53438

Parent Item: D3957-1A-PRELIM

Parent Item Name: Hinge, Door LH Upper

Start Date: 11/04/09

Required Date: 11/10/09

Comments:

Start Qty: 6.00

Required Qty: 6.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M6061T6B0.750X04.00 0		Purchased	No			100	f	17.9020	1.6842			



6061-T6 Bar .750 x 4.00

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

17.902

101283

6.034

104186

11.868

1.6842 DIP 09/11/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

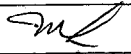
NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	53438
Description: HINGE, DOOR LH UPPER		Part Number:	D3957-1
Inspection Dwg: D3957 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

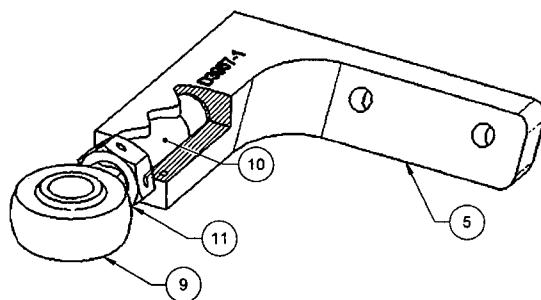
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.69	+/- .030	0.685	✓			
0.281	+/- .010	0.281	✓			
0.281	+/- .010	0.273	✓			
3.00	+/- .030	3.000	✓			
R0.13	+/- .030	R0.130	✓			
Ø0.391 x 1.25	+ .006 / - .001	Ø0.393 x 1.25	✓			
0.094	+/- .010	0.093	✓			
0.125	+/- .010	0.119	✓			
Ø0.063	+ .004 / - .001	0.066	✓			
0.12	+/- .030	0.150	✓			
R0.50	+/- .030	R0.50	✓			
0.563	+/- .010	0.567	✓			
2.31	+/- .030	2.312	✓			
Ø0.203	+ .005 / - .001	Ø0.206	✓			
1.170	+/- .010	1.170	✓			
0.39	+/- .030	0.384	✓			
0.39	+/- .030	0.393	✓			
120°	+/- ½°	120°	✓			
0.250	+/- .010	0.248	✓			

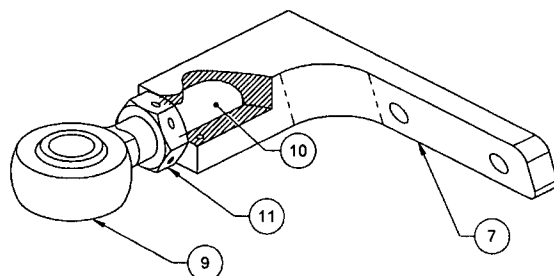
Measured by: L.A	Audited by: 	Prototype Approval:	N/A
Date: 09/11/12	Date: 09/11/12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

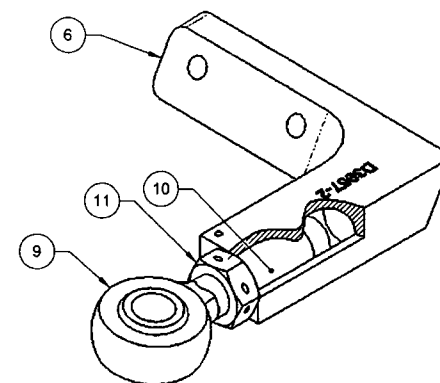
ITEM	QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
1	X				D3957-041	HINGE ASSEMBLY, DOOR LH UPPER
2		X			D3957-042	HINGE ASSEMBLY, DOOR RH UPPER
3			X		D3957-043	HINGE ASSEMBLY, DOOR LH LOWER
4				X	D3957-044	HINGE ASSEMBLY, DOOR RH LOWER
5	1				D3957-1	HINGE, DOOR LH UPPER
6		1			D3957-2	HINGE, DOOR RH UPPER
7			1		D3957-3	HINGE, DOOR LH LOWER
8				1	D3957-4	HINGE, DOOR RH LOWER
9	1	1	1	1	D3518-3	ROD END
10	1	1	1	1	MS124818	HELICOIL, 3/8-24 UNF
11	1	1	1	1	NAS509-6	NUT



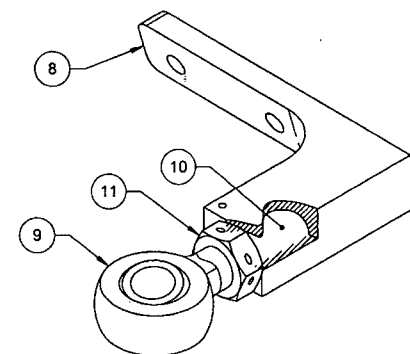
D3957-041 HINGE ASSY, DOOR LH UPPER



D3957-043 HINGE ASSY, DOOR LH LOWER



D3957-042 HINGE ASSY, DOOR RH UPPER



D3957-044 HINGE ASSY, DOOR RH LOWER

RELEASED
2009-10-08
NW

A	NEW ISSUE	BY	09.09.03
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.09.03		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3957** REV. A

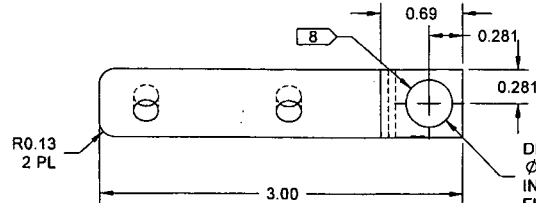
SHEET 1 OF 5

TITLE **HINGE** SCALE **NTS**

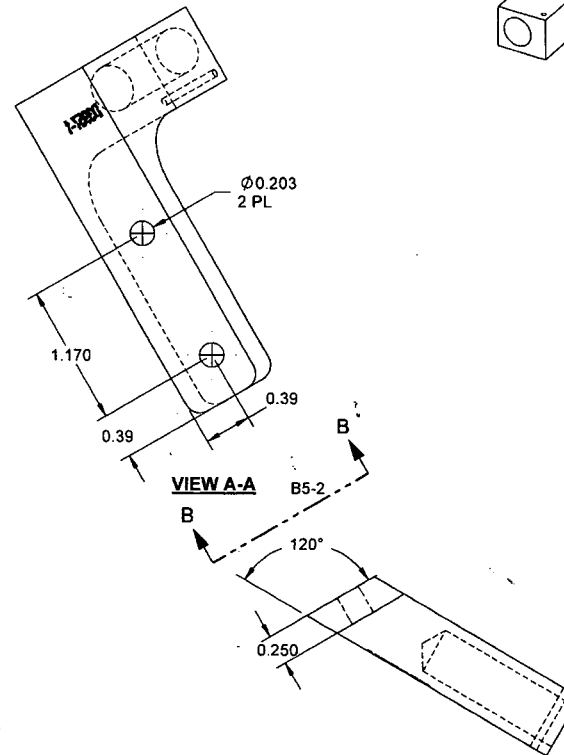
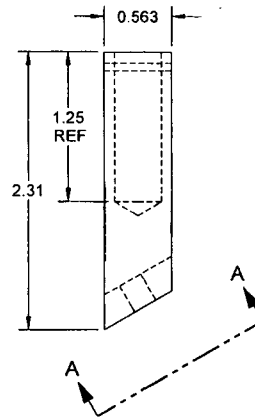
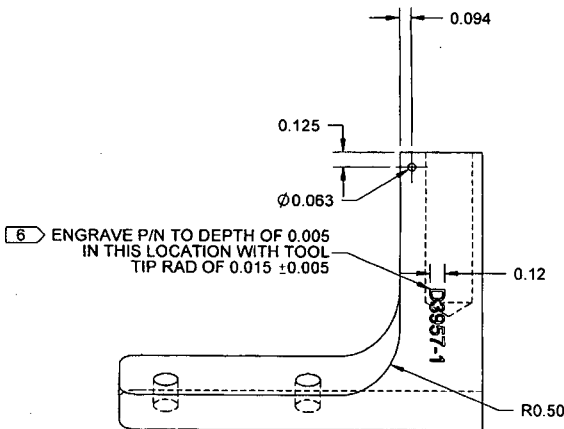
COPYRIGHT © 2009 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

WU 53438

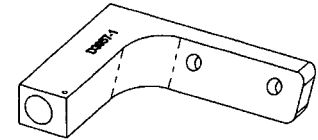


DRILL AND TAP FOR 3/8-24 HELICAL INSERT
 $\varnothing 0.391$ X 1.25 DP
 INSTALL HELICOIL MS124818
 FLUSH WITH SURFACE



VIEW A-A

VIEW B-B



D3957-1 HINGE, DOOR LH UPPER

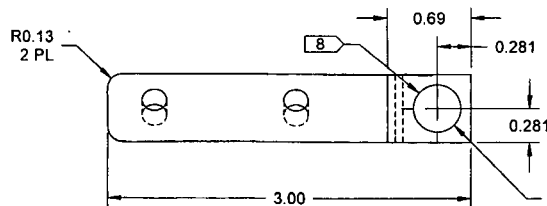
- NOTES:
- 1) MATERIAL: 6061-T6 (6061-T651/T6510/T6511/T62) ALUMINUM BAR
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 REF DART SPEC M6061T6B
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: ENGRAVE P/N AS SHOWN
 - 7) WEIGHT: 0.10 lbs
 - 8) MASK HOLE PRIOR TO POWDER COAT

C3-2

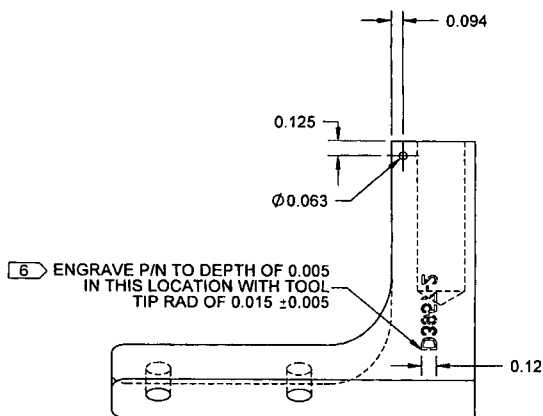
RELEASED
 2009-10-08

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3957	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		HINGE	NTS
DATE	09.09.03	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

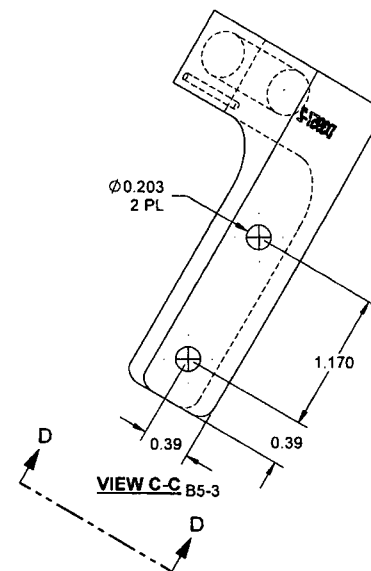
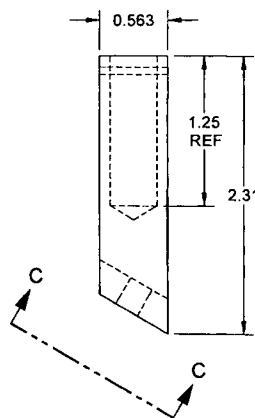
40 53438



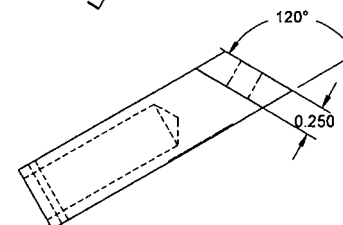
DRILL AND TAP FOR 3/8-24 HELICAL INSERT
 $\phi 0.391$ X 1.25 DP
 INSTALL HELICOIL MS124818
 FLUSH WITH SURFACE



6 ENGRAVE P/N TO DEPTH OF 0.005
 IN THIS LOCATION WITH TOOL
 TIP RAD OF 0.015 ± 0.005



VIEW C-C B5-3



VIEW D-D

C3-3

D3957-2 HINGE, DOOR RH UPPER

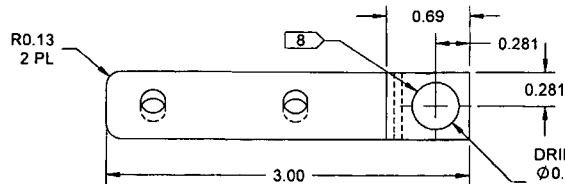
RELEASED
 2009-10-08

NOTES:

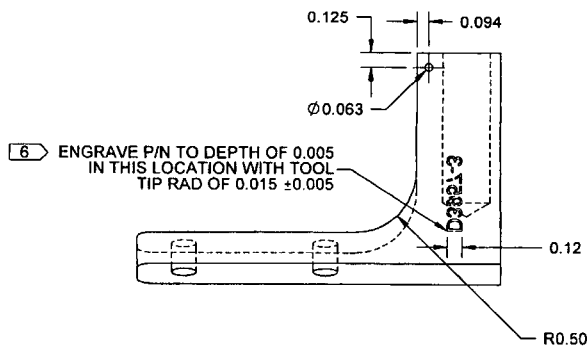
- 1) MATERIAL: 6061-T6 (6061-T6510/T6511/T62) ALUMINUM BAR
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N AS SHOWN
- 7) WEIGHT: 0.10 lbs
- 8) MASK HOLE PRIOR TO POWDER COAT

DESIGN	<i>AS</i>	DART AEROSPACE LTD	
DRAWN	<i>AS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>2/1</i>	D3957	SHEET 3 OF 5
APPROVED	<i>2/1</i>	TITLE	SCALE
DE APPR.	<i>2/1</i>	HINGE	NTS
DATE	09.09.03	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

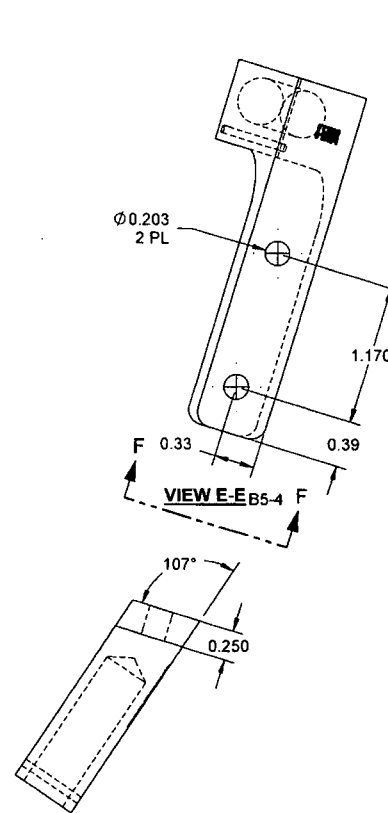
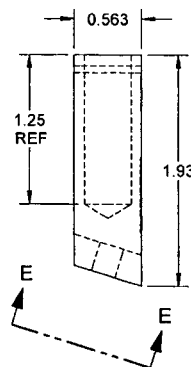
W/O 53438



DRILL AND TAP FOR 3/8-24 HELICAL INSERT
 $\varnothing 0.391$ X 1.25 DP
 INSTALL HELICOIL MS124818
 FLUSH WITH SURFACE



6 ENGRAVE P/N TO DEPTH OF 0.005
 IN THIS LOCATION WITH TOOL
 TIP RAD OF 0.015 \pm 0.005



VIEW E-E B5-4 F

VIEW F-F C3-4

D3957-3 HINGE, DOOR LH LOWER

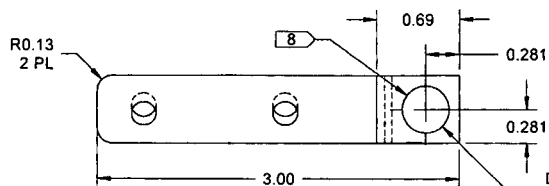
RELEASED
 2009-10-08
 MJD

NOTES:

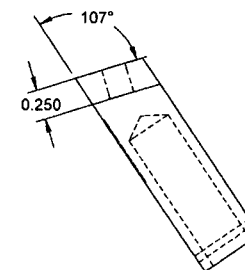
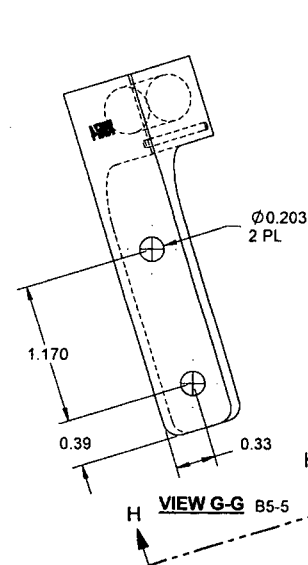
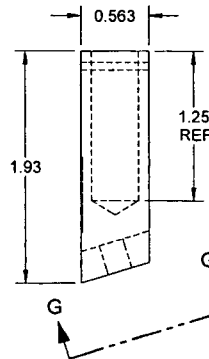
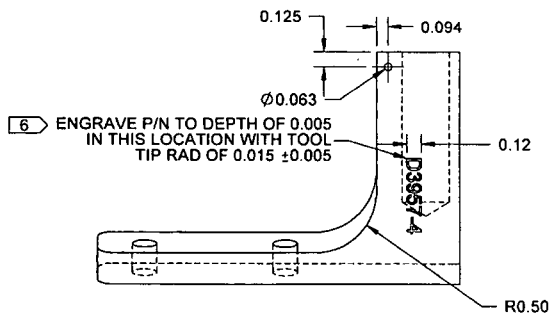
- 1) MATERIAL: 6061-T6 (6061-T651/T6510/T6511/T62) ALUMINUM BAR
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N AS SHOWN
- 7) WEIGHT: 0.09 lbs
- 8) MASK HOLE PRIOR TO POWDER COAT

DESIGN	<i>JS</i>	DART AEROSPACE LTD	
DRAWN	<i>JS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>21</i>	D3957	SHEET 4 OF 5
APPROVED	<i>MD</i>	TITLE	SCALE
DE APPR.	<i>HA</i>	HINGE	NTS
DATE	09.09.03	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR TRANSMITTED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

4053438



DRILL AND TAP FOR 3/8-24 HELICAL INSERT
 $\varnothing 0.391 \times 1.25$ DP
 INSTALL HELICOIL MS124818
 FLUSH WITH SURFACE



D3957-4 HINGE, DOOR RH LOWER

NOTES:

- 1) MATERIAL: 6061-T6 (6061-T651/T6510/T6511/T62) ALUMINUM BAR
 PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
 PER AMS-QQ-A-200/8 (OR AMS 4160)
 REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N AS SHOWN
- 7) WEIGHT: 0.09 lbs
- 8) MASK HOLE PRIOR TO POWDER COAT

RELEASED
 2009-10-08
And

DESIGN	<i>DE</i>	DART AEROSPACE LTD	
DRAWN	<i>DE</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>PH</i>	D3957	SHEET 5 OF 5
APPROVED	<i>PH</i>	TITLE	SCALE
DE APPR.	<i>PH</i>	HINGE	NTS
DATE	09.09.03	COPYRIGHT © 2009 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	